



San Jacinto River Waste Pits Superfund Site

Site Update For EPA HQ

August 11, 2017

San Jacinto River Waste Pits Map





Site History

- 1960s: Paper mill waste disposal
- 2005: State discovers waste pits
- 2008: EPA adds Site to the NPL.
- 2009: EPA issues Orders to McGinnis and International Paper to:
 - Construct a temporary cap
 - Conduct the RI/FS
- 2011: Temporary cap completed
- 2012: Cap repair
- 2013 Cap repair
- 2014: PRPs submit initial draft RI/FS. EPA asks USACE input.



Site History

- 2015: EPA dive team discovers 20 foot gap in the temporary cap; dioxin exposed. PRP's ordered to repair the cap. Intense media interest.
- 2016:
 - Another cap repair needed, inspection protocols updated
 - 8 foot deep scour found near site
 - EPA assumed authorship of the FS
 - Remedy Review Board, HQ dioxin risk assessors, Contaminated Sediment Workgroup, ORD and OSRTI consulted on Proposed Plan.
 - R-6 issues Proposed Plan for public comment September 28.



San Jacinto River Waste Pits

South
Impoundment
1965



Northern Waste Pits Before Cap



North Waste Pits After Cap



Approximate Limit of Armored Cap

Cap Construction Completed July 12, 2011



Remedial Action Objectives

- Prevent releases from the former waste impoundments.
- Reduce human exposure from consumption of fish.
- Reduce human exposure from contact with contaminated materials.
- Reduce exposures of aquatic animals (clams, crabs, etc.).



Alternatives Rejected

- No further action.
- Institutional controls.
- Upgraded caps.
- Partial Solidification/Stabilization.
- Partial removal alternatives.



None are Reliable for all Storm Events



Preferred Alternative

Northern Waste Pits

- Remove 152,000 cubic yards of waste for offsite disposal.
- Prevent releases during construction.
- Cover remediated areas with clean fill.
- Cost: \$87 million.



Preferred Alternative (cont.)

Southern Impoundment

- Remove 50,000 cubic yards of waste for offsite disposal.
- Remove/replace existing building/slab.
- Backfill with clean soil & re-establish vegetation.
- Cost: \$9.9 million.



Preferred Alternative Rationale

- The waste is highly toxic and persistent (100s of years).
- High threat of repeated storms and constant river flow against man-made features.
- The history of armor cap maintenance.
- Avoids catastrophic release in un-controlled situation [USACE projected 80% loss in superstorm].

Changing River Conditions

1966



1997



Public Comment Period

- September 28' 2016 to January 15, 2017; public meeting in October 2016
- 7,000 written comments received – [94% in favor of removal, 6% opposed] plus 48,000 petition signatures and xxx thousand pages of technical comments
- Internet based comment system.
- Public updates: Feb 2017 & May 2017 fact sheets.



Site Stakeholders

- San Jacinto River Coalition
- Galveston Bay Foundation
- Coastal Conservation Association Texas
- San Jacinto River Fleet
- San Jacinto Citizens Against Pollution (CAP)
- Sediment Management Workgroup
- Texas Association of Business
- McGuinness [Waste Management]
- International Paper

Site Stakeholders

- Texas Commission on Environmental Quality
- Harris County
- City of Baytown
- Port of Houston Authority
- Federal & State Trustees (NOAA, USFWS, TCEQ, TX GLO, TPWD)
- Congressional – Green (TX-21), (will add others)
- USACE, USGS

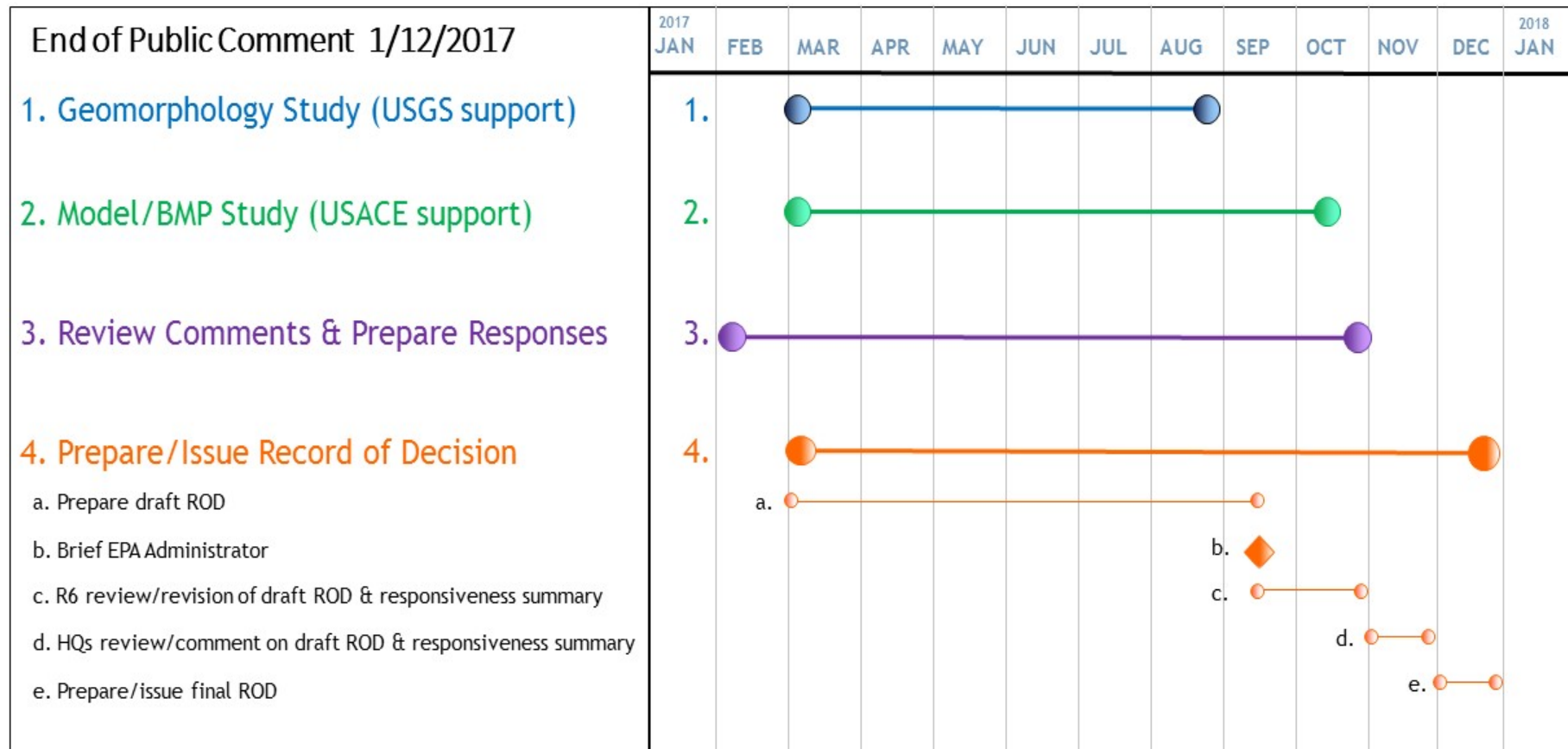
Key Issues [draft]

- Would an improved cap in place be permanent?
 - Last year the Corps report said modeling a huge storm event could wash away 80% of the cap.
 - PRP's could not duplicate the model results, USACE redoing their models
 - Historical photos show loss of land, river dynamics.
 - USGS will provide assessment by a geomorphologist
 - Discovery of 8 foot deep scouring near the site.
- Can principle threat waste be excavated without creating pollution problem?
 - The proposed remedy envisioned dry excavation behind sheet piles but PRPs and downstream commenters feared that dredging and release of dioxins was inevitable.
 - USACE review indicated that dredging is not inevitable and that dry excavation could be accomplished using a caisson but at added cost.
- Cost estimates were reevaluated in response to comments and refinement of remedies.
 - Improved cap in place: was \$..... now \$.....
 - Excavation and disposal: was \$..... now \$.....

San Jacinto River Waste Pits

Record of Decision Schedule

As of: August 2017



Following slides not needed

- But you might want to save them as backup



Lower San Jacinto River

1994

San Jacinto River at I-10 (Photo: HCFCD)

EPA Region 6/HQs Coordination

- Dioxin consult (toxicity; principal threat waste)
- NRRB consult
- CSTAG consult
- EPA HQs consult on Proposed Plan
- EPA ORD consult on surface water quality



Potential Changes to the Proposed Plan

- USACE modeling enhanced Alternative 3aN cap.
- Include cofferdam to prevent releases during removal.
- Lower waste pits cleanup level to 30 ppt.
- Cost.



Cap History




- Repairs required: 2012, 2013, 2015, 2016.
 - Armor cap thin or missing.
 - Dioxin wastes exposed - 2015.
- Cap improvement required - 2014.
- Inspection protocols updated - 2016.
- Up to 8' scour in river bed near cap - 2016.

Northern Waste Pits Before Cap



San Jacinto River Waste Pits Site

291 Surface & subsurface
samples within site boundary.

-  Waste Pits
-  Southern Impoundment
-  Sediment - ng/kg TEQ_{DF}
Dioxin

